

## **National Academies' Report USACE Methods of Project Analysis and Peer Review**

The U.S. Army Corps of Engineers welcomes these four reports from the National Research Council of the National Academies.

They follow a previous report from 2002 about peer review for water resources project planning. The Corps appreciated the independent objective advice that the report provided and has begun instituting independent peer review in large, controversial projects.

The current reports cover different dimensions of the Corps' planning processes, including Analytical and Planning Methods, River Basins and Coastal Systems and Adaptive Management. There is also a report, A New Opportunity for Service that synthesizes each of the four panel reports and provides advice on implementing the panels' recommendation and identifies the overall themes, issues and recommendations that came from the panels' research and discussions.

An important theme that surfaced from the four panels within the Section 216 study was the need to revise existing authorities and planning approaches to better address the contemporary challenges faced by the Corps. The NRC report recommends that, in the near term, the Corps should concentrate its planning activities on portfolio planning. Portfolio planning means evaluating new investments in the context of the condition and operation of the existing infrastructure. As part of portfolio planning the NRC recommends the Corps should:

- Focus the ecosystem restoration function on restoring hydrologic and geomorphic processes in large rivers and coastal systems;
- Expand the economic analysis to include consideration of the impacts of new projects, or changes in operations, on regional and national economies and the implications for national and international competitiveness; to explicitly evaluate and report benefits forgone; and to explicitly evaluate NED benefits accruing from restoration measures;
- Conduct regional assessments to help identify key water resources issues of federal-level significance; and
- Review reconnaissance study cost limitations and distinction between the reconnaissance and feasibility study stages.

Specific key recommendations from the panel that evaluated analytical methods and approaches for planning include reconciling inconsistencies with the existing body of national water policy; expanding decision making criteria to include

consideration of other criteria; conducting periodic reviews of completed projects; conducting a comprehensive review of experiences with stakeholder participation procedures at the districts; strengthening programs in the areas of systems engineering, risk and uncertainty analysis and the integration of engineering and ecosystem analysis.

The panel on adaptive management recommends post-construction evaluations as a standard for adaptive management of Corps projects. It also recommends collaborating with stakeholders in the adaptive management of projects; to enlist independent experts to provide advice and validate the assumptions and rationale used in the design and implementation of adaptive management; and, to establish a Center for Adaptive Management. The NRC defines adaptive management as an approach that provides a "basis for anticipating and adjusting to present uncertainties and future changes".

The key recommendation of the panel on river basins and coastal systems planning is the need to change the Corps focus to integrated water resources systems planning within river basins and coastal systems. Specific actions recommended are to revise planning guidance and procedures to provide the techniques needed to conduct this type of analyses; to amend cost sharing requirements to fully fund (Federal) the portion of study costs associated with the evaluation of all appropriate benefits and costs at all relevant scales of space and time (beyond the project specific study area); and, to consistently evaluate cumulative effects of all projects.

Many of the recommendations will require action by the Congress and Administration to implement. For example, each of the reports noted the conflicts and inconsistencies within the body of law, executive orders and other practices that constitute federal water resources policies. The reports contain recommendations to resolve these inconsistencies and to clarify management objectives for the Corps of Engineers.

There are other recommendations, which the Corps has the authority to implement. In some cases, the Corps has begun implementing these recommendations. In others, the Corps intends to proceed doing so. Examples include expanding stakeholder participation and increasing inter-agency coordination on large-scale efforts.

The Congress asked the National Academies to review Corps' planning and project review practices in Section 216 of the Water Resources Development Act of 2000. The participants from the National Research Council recognized the many challenges and numerous water planning and management controversies that the Corps faces at the turn of the twenty first century. Their recommendations will help determine the future of the Corps in this new century.

The report, "Review Procedures for Water Resources Project Planning" provides

recommendations on a review process for the Corps to use for a range of projects from relatively simple and routine to the most complex and controversial ones. Recommendations on river basins and coastal systems are provided in the report "River Basins and Coastal Systems Planning Within the U.S. Army Corps of Engineers". The panel's report on "Adaptive Management for Water Resources Project Planning" provides recommendations on how the Corps could best apply the principles of adaptive management. Recommendations on the Corps planning methods are presented in the report "Analytical Methods and Approaches for Water Resources Project Planning". And finally, the Coordinating Committee presents their synthesis and overarching themes from all the panels' work in their report - "U.S. Army Corps of Engineers Water Resources Planning: A New Opportunity for Service".